

Stock-book Non E. coli

(removed June 13 1958)

**Professor J. Lederberg**  
Department of Genetics  
University of Wisconsin  
Madison 6, Wisconsin

Actinomyces

Agrobacterium

Pseudomonas

Yeast

Salmonella  
enterica

Phages

Actinomyces

WAc	Ref	Source	Notes
1	S. griseus (1947)	McCoy	Walcoman #4 Rutgers 3496. <sup>R</sup> 541 254/ml
2	879-1	WAc-1	Arginineless (slow ± on minimal)
3	879-2	WAc-1	Leucine no residuum
4	880-	"	+ on minimal
5	"-6	"	no residuum
6	"	"	
7	"	"	
8	"	"	
9	"	"	
10	S. violaceus	McCoy 12/23/51	Fair growth poor spor.
11	S. olivaceus	}	good growth, population in minimal nutrient
12	S. gypsoides		fully colonies, diffusing pigment
13	S. rubeus	NRRL 12/21/51	B-902
14	S. laevigatus	"	B-547
15	S. antibioticus	"	B-1115
16	S. celicolor	"	B-1257
17	S. griseus	"	B-1068
18	8807-	WAc II	
19	"	"	
20	"	"	
21	Burkholder	8	S. griseus threonineless B,
22	"	16	" threonine
23	"	17	" methionine
24	"	18	" urea - arginine

10-25-54	30W		
10-25-54	31W		
10-25-54	32W		
10-25-54	33W	Streptomyces sp	wild types isolated at Evanston Illinois 1954
10-25-54	34W		
"	35W		
"	36W		
"	37W	WAc-36	golden colored lavender gray colored serine or cysteine def. tryptophan def. } by u.v.
"	38W	WAc-36	
"	39W	WAc-34	
"	40W	WAc-34	
"	41W		
WAc	42W		
WAc	44W		
WAc	45W	ex WAc 32	leuc-green S. cyanus
WAc	46W		
WAc	48W		
WAc			
WAc	51W		
WAc	52W		

WAc 59 // WAc 34 S. griseus Trypt<sup>-</sup> Purine<sup>-</sup> (GorA out on H)







# Pseudomonas fluorescens

## STOCKS

PF	Ref.	Source	Agency	Remarks	
0	A3.12	Stamier	ne PFS	Wild type	
1 ✓	761-1	PF0	UV-Penicillin	Histidine?	M -
2 ✓	761-2	"	"	Isoleucine-Valine	IV -
3 ✓	761-7	"	"	Phenylalanine	Pa -
4 ✓	761-9	"	"	TRYPTOPHANE	Tr -
5 ✓	761 b	PF3	Streptomycin METB	Pa-SR	Pa-SR
6 ✓	761 b 1	PF0	uv-penicillin	Leucine	L -
7 ✓	" b4	"	"	Guanine (Hypox +; Aden $\pm$ )	Gu -
8 ✓	" b6	"	"	ARGININE	Ar -
9 ✓	" b8	"	"	METHIONINE	M -
10 ✓	761-5	PF0	"	Phenylalanine; leuc+isoleu+val	
11 ✓	761-14	PF0	"	<del>Met B 12 + Meth</del> (Pys+Gln)	
12 -	-	DF6	Streptomycin-resistant	Leucine SR	L-SR
13 x	-	PF16	"	A3.16 SR	
14 x	-	PF17	"	A3.17 SR	
15 ✓	A3.12	Stamier	Family PF0		
16 x	A3.16		Received from Stamier		
17 ✓	A3.17		" " "		
18 ✓	" T-23 "		" " "		
19 ✓	870-1	PF12	UV, Penicillin	Leuc SR; Isol. Val	
20 ✓	-2			" TRYP.	
21 ✓	-3			P-12/Meth " UNIDENTIF. <del>Genetically identical</del>	
22 ✓	-4			" HIST	
23 ✓	-1	PF9	UV, Penicillin	Meth	Isol. Val.
24 ✓	-2			" TRYP.	
25 ✓	-3			" HISTIDINE	
26 ✓	-4			" CYSTINE	
27 ✓	-5			" <del>Met B</del> CYSTINE	
28 ✓	-6			" GUANINE	

# Yeast cultures.

WY	Ref.	Source	Remarks
1 ✓	Pomper 62	(1100)	Prototroph a S. cerevisiae despire
2 ✓	Pomper 63		" a " floe
3 ✓	Pomper 62-20-194		typt, unacid a " floe
4 ✓	Pomper 67-1		meth, aden a " despire
5 ✓	Rotshan S. fragilis		
6 ✓	Rubbo 4/12/53	Red Star (Fresh)	isolated from com. product
7 ✓	" "	Red Star ADY (dry)	" " " "
8 ✓	" "	WY-6	euphramin-induced "petite"
9 ✓	" 12/17/53	WY 6	euphramin-induced petite
10 ✓	" 12/17/53	WY 6	euphramin-induced petite
11 ✓	" 12/18/53	WY 7	euphramin-induced petite
12 ✓	" 12/23/53	WY 5	euphramin-induced petite
13 ✓	Leberberg 1/3/54	WY 3 x WY 4	Diploid cross of WY 3 & WY 4 desip.
14 ✓	TATUM 1/19/54. 99R2	(from com.)	ADY (pink)
15 ✓	2018a		meth
16 ✓	2022a		"
17 ✓	200a		ad3 typt unacid granular despire
18 ✓	201a		typt unacid despire
19 ✓	2053 s		meth
20 ✓	2508 a		ad typt despire
21 ✓	Lindgren 1/21/54.	15189	a g S HA ME MG ✓ despire
22 ✓	" "	14854	a g S HA ME MG poor growth
23 ✓	" 2.5.54	12965	"
24 ✓	" 2.5.54	13893	"
25 ✓	Spurni 2.10.54	59RT	+ (F. methyl) Normal
26 ✓	Spurni 2.10.54	59RA	" Petite
27 ✓	Rubbo 12.2.54	WY 1	UV irradiation Methionin less
28 ✓	" 14.2.54	Diploid cross WY 15 x 17	Prototroph
29 ✓	" 14.2.54	Diploid cross WY 15 x 18	"
30 ✓	" 14.3.54	Petite en WY 15	"
31 ✓	" 14.3.54	Petite en WY 16	"
32 ✓	" 14.3.54	Petite en WY 4	"
33 ✓	" 14.3.54	Petite en WY 18	"
34 ✓	" 14.3.54	Petite en WY 3	"
35 ✓	" 14.3.54	Petite en WY 3	"
36 ✓	" 14.3.54	Petite en WY 17	"
37 ✓	Caroline Raut	50.2	a
38 ✓	" "	108.3N	a th Me Gal-
39 ✓	" "	158.4	a ad Gal Mal-
40 ✓	" "	168.4	a pa th Gal-
41 ✓	R. R. FOWELL	DCL.536	
42 ✓	28/9/54.	HMH+	
43 ✓	" "	HQ5a-	
44 ✓	" "	HQ10c-	
45 ✓	FW. 10/20/54	WY 38-UV.	
46 ✓	" "	"	
47 ✓	" "	"	
48 ✓	" "	"	
49 ✓	" "	"	
50 ✓	" "	"	
51 ✓	" "	"	
52 ✓	" "	"	
53 ✓	" "	"	
54 ✓	" "	"	

Isolated from mixed cult. as record  
 WY 59 = ~~pure~~ culture, OK as record.

WY.	Ref.	Source	Remarks
55	Flou. 10/20/54	WY 38 UV.	Am. amine yeast
56	"	"	"
57	"	"	"
58	"	"	"
59	"	"	amine yeast
60	"	"	"
61	"	"	yeast
62	"	"	"
63	"	"	amine yeast
64	"	"	"
65	"	"	"
66	"	"	amine yeast
67	"	"	"
68	"	"	"
69	"	"	"
70	"	"	"
71	"	"	"
72	"	"	NAA - yeast
73	"	"	amine yeast
74	"	"	"
75	"	"	"
76	"	"	"
77	"	"	"
78	L.J. WICKERHAM	NRRL Y1822	Diploid <i>H. subpelliculosa</i>
79	" 11/1/54	" Y1683	"
80	"	" Y-1822-12	Mating type " "
81	"	" Y-1683-11	"
82	"	" Y1598	<i>Zygosaccharomyces oshlgii</i>
83	"	" Y2153	Bisexual diploid <i>H. anomala</i>
84	"	" Y-366	Unisexual " <i>H. anomala</i>
85	"	" Y2153-4	Mating type " "
86	"	" Y-366-8	"
87	"	" Y-1134	<i>Saccharomyces lactis</i>
88	"	" Y-230	"
89	"	" Y-1285	Mating type <i>S. lactis</i>
90	"	" Y-1140	"
91	Flou 2/18/54	WY42 UV. (F-2)	leucine + arginine R+
92	"	" (F-4)	lysine R-(5)
93	W Lindgren	* 14240	16068 α sue Gal Malt R- (5) Hel rat φ Tryp H ur M P <sub>1</sub> P <sub>2</sub> P <sub>3</sub>
94	W Rec'd 3/1/55	UR R6W 16068	16072 α + + - + - + + + + + + +
95	"	16072	16070 α - + + - + + + + + + + +
96	"	16070	16071 α - - + - + + + + + + + +
97	W Rec'd	276/3	Ad - white R-
98	W Eptimant	B15 P4	R-
99	W 7/21/55	53/19 a	S-
100	W	53/19 c	S-
101	W Raut.	112.3 N (Normal)	i Pa Math me ga C
102	W 12/15/55	102.3 P-2 (petite)	same
103	"	102.3 P-3 (petite)	same
104	"	56.1 P (petite)	α pa Ma? Th Ma? Ga? C
105	"	146.1 (seg)	α pa Ma Th C <sub>2</sub>
106	"	145.2 (seg)	α pa Ma Th C <sub>2</sub>
107	"	146.2 (seg)	α Pa math? C <sub>2</sub>

Dried as received

\* good mating pair

WY	Reference	Source	276/3ba.	Remarks.
108 ✓	ROMAN 24/3	4240C - Ephrussi	n. a. ad <sub>2</sub> .	
109 ✓	"	4235D - "	"	$\alpha$ ad <sub>2</sub>
110 ✓	REW.	241a) spore seg. from D16 (91x8-16)		Th <sup>-</sup> R <sup>+</sup> S <sup>+</sup>
111 ✓	RW	84 dip 92x40		Th <sup>-</sup> petite.
112 ✓	"	G3		
113 ✓	"	C4		dip. 26x42. (p 104 notes.)
114 ✓	"	<del>G3</del>		
115 ✓	"	8-16		Th <sup>-</sup> petite from WY44 - UV.
116 ✓	"	D14		91x8-16 proto selection. } diploid.
117 ✓	"	D16		" " unselected }
118 ✓	"	10-25		- In <sup>-</sup> ? from WY44 - UV
119 ✓	"	2C (8-16x42)		dip. for test of nature of 8-16 petite.
120	SPIEGELMAN 1/57	WINGE'S STRAIN 55.		G.g. Madra D/d. - dip S.c. x Sch. (LST)
121	"	"	33-E-26.	" Nist. 9c a.
122 ✓	REW 91-L.	$\alpha$ Arg <sup>-</sup> H <sup>+</sup> R <sup>+</sup>		- cell resistance (21.2g/L in 6TY) not clonally stable.
123 ✓	"	91-LP3	" " R <sup>-</sup>	
124 ✓	"	91-LP5	" " "	} <del>Geniflavine</del> Geniflavine petites from 91-L.
125 ✓	"	91-LP7	" " "	
126 ✓	"	91-LP9	" " "	
127 ✓	"	110-Ac3.	$\alpha$ Thz <sup>-</sup> Ac <sup>+</sup> R <sup>+</sup>	- actidione resistant (10mg/L) - clonally stable.
128 ✓	"	110-Ac2	" " " "	
129 ✓	"	110-AP3	" " " R <sup>-</sup>	- acriflavine petite from WY127.
130 ✓	"	110-PI	$\alpha$ Thz <sup>-</sup> R <sup>-</sup>	" " " WY110.
131 ✓	"	110-P4.	" " " "	" " " "
132 ✓	"	D75.	hybrid WY91 x WY44.	
133 ✓	"	D79.	" WY92 x WY44.	
134 ✓	"	124b	$\alpha$ Arg <sup>-</sup> R <sup>+</sup>	- Spore seg. from (D75). Not stim. by leucine: <sup>sporulate</sup> <del>Do not</del>
135 ✓	"	113f	$\alpha$ Arg <sup>-</sup> R <sup>+</sup>	" " " " Will not sporulate
136 ✓	"	T1	Hybrid 91-L x 110-Ac3.	} Sporulation +.
137 ✓	"	T6.	" (WY122) x (WY127)	

Sp 3 *Spirillum itersoni*

SM-6 Bawon (May 1960) *Sevatia marcescens* original culture  
SM-6-11 " SR high freq. recipient  
SM hybrid 6 L<sup>+</sup> " SS lat<sup>+</sup> from cross of ST2 x SM6 → 6L<sup>+</sup>  
(= donor now for lat)

NB: There is a *Sevatia* in the Colibool too, W 2745

# Coli and Salmonella phages.

("pp-")

Source p. Host range. + character.

	Source	p.	Host	range.	+ character.
1	Sewage	225	SY-20	small plaque	<sup>W24</sup> K-12 <sup>S</sup>
2	"	225	SY-20	small plaque	clear K-12 <sup>S</sup>
3	"	225	SY-21	small large plaque,	hazy centers
4	"		SY-21	large plaque	
5	SY-21	226	SY-36	(S. gallinarum) only.	
6	Sewage		SY-21	moderate cytolitic plaque.	SY-21; SY-23.
7	SY-23	#2. -	SY-21	small plaques	(maybe two @), SY-36.
8	Sewage	458-2	K-12	large plaque	
9	Sewage	458-20	K-12	small plaque,	high titer
10	Hershey	T16	K-12	small plaque	
11	"	Obordet Small	K-12	wide margins	
12	"	C36	K-12	very wide margins	on W811
13	Luria		K-12	≥ C36.	
14	Sewage	458-C1	K-12	<u>Lysogenic</u>	few resistant see W1297 = λ2?
15	"	" C2	K12		
16	"	" C3	K12		
17	"	" C4	K12		
18	"	" C5	K12		
19	"	481.	W518	(λ-) but not W811	(λ+)!
20	Sewage	499	W518	not W811.	
21	" 20	513	Mutant of p20;	attacks W811.	
22	Sewage	458a	K-12.		

- 65
- 66
- 67
- 68
- 69
- 70 *napoli*
- 71 SW10011
- 72 SW1006
- 73 SW1007 (b)
- 74 0361 (b)
- 75 1005
- 76 1004
- 77 1030
- ~~78 1032~~
- 79 1033
- 80 1034
- 81 1046.i
- 82 1046.12
- 83 1035
- 84 *S. gallinacea*
- 85 *S. pullorum*
- 86 SW1043
- 87 1045
- 88 1049
- 89 926
- 90 PB-1300
- 91 SW1061
- 92 SW1092
- 93 SW940

Csp.

p.I

A1  
A2  
A3

abc-d SW 935-936

(mostly a) A: pura

(part)  
m  
S 4T2

Salmonella typhimurium Stock Cultures

Lilleengen cultures

No.	Representative Used	Other
LT-1	84 = TM1	306✓✓
LT-2	85 = TM2	87✓✓
LT-3	22	525
LT-4	125	536✓✓
LT-5	193	
LT-6a	205	
LT-6b	538	119
LT-7	578 GADS	203✓✓
LT-8	43	590
LT-9	116	497, 504
LT-10	414	
LT-11	74✓✓	82✓✓
LT-12	137	114✓✓
LT-13	167✓✓	331
LT-14	135	199, 11412
LT-15	297✓✓	508, 518✓✓
LT-16	9✓✓	23✓✓
LT-18✓✓	100	89
LT-19	2✓✓	
LT-20	428	
LT-21	192	
LT-22✓✓	409 GADS	426

Edwards cultures

No.	Details
S-20	" Monophasic I
S-21	" " II " Edwards 1946.
S-23	Diphasic = Wheeler - Borman 3542.
12.	S.typhimurium var. copenhagen
13.	" " "O" form
14.	" " phase II <del>Edwards</del>

Hershey culture

No.	Details
SW-36	S.typhimurium var. Webster

Boyd cultures

No.	Details
1404	Supposedly non-lysogenic
1411	" " " "

Berman cultures

No.	Details
SW-516	Vet. Sci. Mouse colony
SW-517	" " " "

Salmonella Serotypes

Obtained from Edwards--- number refers to station circular # 54  
 = SW 701-~~850~~900

- 1. ✓ S. paratyphi A
- 2. ✓ S. paratyphi A var. durazzo
- 3. ✓ S. paratyphi B *self typhim (lyophil 703A, 703B)*
- 4. ✓ S. paratyphi B
- 6. ✓ S. paratyphi B phase II
- 15. ✓ S. stanley *12, 13 ✓*
- 16. ✓ S. heidelberg
- 17. ✓ S. chæster
- 18. ✓ S. san-diego
- 21. S. derby
- 27. S. abortus-ovis
- 28. ✓ S. abortus-bovis
- 36. ✓ S. cholerae-suis var. kuzendorf
- 50. ✓ S. newport
- 56. ✓ S. glostrup
- 57. ✓ S. typhi H 901 W B ADS (lyophil # SW 757)
- 59. ✓ S. typhi 2V
- 60. ✓ S. typhi Watson V
- S. typhi V-E 1
- S. typhi V-F 1
- ~~S. typhi~~
- ~~S. typhi~~
- 64. S. enteriditis
- 67. ✓ S. moscow
- 68. ✓ S. hægdam
- 70. ✓ S. eastbourne -
- 71. ✓ S. sendai
- 74. ✓ S. gallinarum
- 75. ✓ S. pullorum
- 76. ✓ S. london
- 87. ✓ S. senftenberg
- 90. ✓ S. aberdeen
- 91. ✓ S. poona
- 92. S. worthington
- 95. S. hvittingfoss (SW 745)
- 98. ✓ S. kentucky
- 103. ✓ S. abony *(lyophil 803A, 803B)*
- 105. S. wichita
- 119. S. habana
- 125. ✓ S. altendorf
- 128. S. vejle
- 129. ✓ S. montivideo
- 134. E. coli-1
- 137. ✓ E. coli-2
- 139. ✓ E. coli-3
- 140. ✓ E. coli-4 *(lyophil 840A, 840B)*
- 142. ✓ E. coli-5
- 145. S. kaapstad
- 148. ✓ S. salinatis
- 162. ✓ S. florida ✓
- 163. S. madelia phase f

SW 777 ✓  
 SW 778 ✓  
 SW 779 ✓  
 SW 783 ✓  
 SW 786 ✓  
 SW 782 ✓  
 SW 809 ✓

Salmonella phages

No.	Source	Details
SP-1	Sewage	SY-20 small plaque
SP-2	"	SY-20 small clear plaque
SP-3	"	SY-21 large hazy plaque
SP-4	"	SY-21 large clear plaque
SP-5	SY-21	S.gallinarum
SP-6	Sewage	SY-21; SY-23
SP-7	SY-23	SY-21
SP-49	Rittenberg	S. cholerae-suis
SP-50	"	S. poona
HP-21	Hershey	SW-36 Large plaque
HP-13	"	" Small "
HP-15	"	" Medium "
HP-18	"	" " "
HP-20	"	" Hazy small plaque
HP-22	"	" Medium plaque
HP-23	"	" Small "
LP-30	Lilleengen	LT-14 # 135
LP-39	"	LT-13 # 331
LP-36	"	LT-22 # 409
LP-34	"	LT-12 # 111
LP-31	"	LT-4 # 125
LP-33	"	LT-16 # 23
LP-8	"	<del>LT-11 # 74</del> LT-6b #119
LP-32	"	LT-11 # 74
LP-37	"	LT-1 # 306
LP-4	"	LT-3 # 22
LP-2	"	LT-18 # 100
LP-28b	"	LT-5 #193
PLT--	LT--	Any phage obtained from lysogenic members of LT

~~LT--~~

PLT' LT phage from PLT via activation

942-1 Badgcher Badgcher's X phage C

942-2 " " phage A

85P Uetake Phage from S. elandica 7482 (S251124).

86P .. " S. new-hampshire 5411 (S251125)

E2-17 .. " S. cambridge (S251126)

E2-27 - - S. kinshasa (S251127)

8Y  
 1 para A  
 23 pullorum  
 14  
 15  
 16  
 17  
 18 abortusbovis  
 22 typhimurium ✓  
 23 typhimurium ✗  
 24 abortus equi  
 25 newport  
 28 london  
 28 urbana  
 30 inverness  
 31 adelaide  
 32 montevidео  
 33 panama  
 34 para A  
 36336 gallinarum  
 37 dublin  
 39 typhimurium  
 40 typhimurium  
 42 para A  
 43 enteritidis  
 46 enteritidis  
 51 para B  
 52 para B  
 53 para B  
 54 para B  
 56 cholerae suis  
 57 typhi suis  
 58 abortus ovis  
 61 typhimurium IV variant Methionineless.  
 70 typhimurium methionineless  
 71 typhi suis Bethesda 2943  
 72 para A S " " 3007  
 73 sendai " " 3280  
 74 typhi VW  
 75 para A  
 76 para A ✓ Kauffmann.  
 77 para A durazzo "  
 78 typhi 3 "  
 79 typhi Watson ✓ " ———— B.A.D.S.  
 80 sendai "  
 81,2 blegdam "  
 83 typhimurium  
 854 kentucky  
 115 coli 1  
 139 anatis  
 20 } typhimurium 1 + 2.  
 21 }

SALMONELLA

SW	Reference	Source	Agent	Mutation	Details
1.	I IV V,1,--	prtotrophic		S-20	monophasic I Edwards
2.	I IV V,-,1,2,3	"	"	S-21	" II "
3.	208	SW-1	U.V.	Histidine	
4.	"	"	"	"	
5.	"	SW-2	"	Yeast Extract	
6.	208	"	"	PAB weak response	
7.	"	SW-2	"	Leucine-iso leucine-valine	
8.	"	"	"	Tryptophane	
9.	"	"	Spontaneous	Xylose variable (#)	
10.	"	SW-8	U.V.	Arabinose (-)	
-----					
11.					
12.		Sw-10.	Sp6	Sp6R	( nutrition uncertain)
13.	260	SW-7	U.V.	Galactose (-)	Sp6S
14.	NZ 9/1/48	4 SW-1	U.V.PEN	Leucine	
15.	" "	" 1	" "	leucine replaceable by A 12	(CM)
16.	2 9/14	1 SW-3	" "	(Histidine) Proline	
17.	" B1	SY-23	" "	Histidine	
18.	" B2	"	" "	Leucine	
19.	" B3	"	" "	Methionine	
20.	" B4	"	" "	Cystine or methionine	
21.	" B5	"	" "	"	
22.	" B6	"	" "	A 12 any	
23.	" B7	"	" "	A 5 not single	
24.	" B1a	SW-17	" "	Lysine # methionine	
25.	" B1b	"	" "	Threonine	
26.	" B1c	"	" "	A-12-(all)	---
27.	" B2a	Sw-18	" "	Methionine	
28.	" B2b	"	" "	"	
29.	" B2c	"	" "	Ess. A.A.	
30.	" B2d	"	" "	A 12 ( only)	
31.	" B2e	"	" "	"	
32.	" B3a	SW-19	" "	Proline ( OH proline)	
33.	" B3b	"	" "	Leucine	
34.	" B3c	"	" "	Proline ( OH proline)	
35.	" B3d	"	" "	Histidine	
36.	" B3f	"	" "	Cystine	
37.	Hershey	S. Webster			
38.	NZ B1c	SW-17	" "	A 12 only	
39.	" B9	SY-23	" "	Phenylalanine, tyrosine ( both)	
40.	" B11	"	" "	Proline	
41.	" B16	"	" "	Histidine	
42.	" B10	"	" "	Methionine	
43.	" B1d	SW-17	" "	Proline	
44.	" B1e	"	" "	Methionine	
45.	" B2g	SW-18	" "	"	
46.	" B2h	"	" "	"	
47.	" B3g	Sw-19	" "	Proline	
48.	" B3h	"	" "	"	
49.	" B3j	"	" "	Iso-leucine # valine	
50.	Rittenberg	S. cholerae-suis		( requires B1)	
51.	"	S. poona			
52.	NZ 10/19	SW-25	U.V. plates	Maltose (-)	
53.	"	"	"	"	
54.	"	"	"	"	
55.	"	"	"	"	

Salmonella Con't

SW	Reference	Source	Agent	Mutation	Details
56.	NZ 11/2	SW-50	U.V.	PEN.	Cystine
57.	" "	"	"	"	Cystine # methionine
58.	" "	"	"	"	Leucine
59.	" "	"	"	"	Pyrimidine ( uracil)
60.	" 11/4	"	"	"	A 12
61.	" "	"	"	"	"
62.	" "	"	"	"	"
63.	" "	"	"	"	"
64.	" "	"	"	"	"
65.	" "	"	"	"	?
66.	" "	"	"	"	?
67.	" 11/5	SW-52	"	plates	Arabinose (-) glucose -
68.	" "	"	"	"	"
69.	" "	"	"	"	"
70.	" "	Sw-31	"	"	Galactose (-)
71.	" "	"	"	"	"
72.	" "	"	"	"	"
73.	34R Rittenberg	SW-49			SP 49 R
74.	91 M "	SW-50			Arginine
75.	" 2 "	SW-74			Arginine Purines(NZ xanthine)
76.	Hershey ( NZ)	SW-36	Spontaneous		Bl or Ca pnt.
77.	#/14	SW-36(76)	U.V.	PEN	Cystine (BL)
78.	NZ 3/28	"	"	"	Cystine ( serine)
79.	" "	"	"	"	"
80.	" 3/29	"	"	"	" ( arginine)
81.	" "	"	"	"	Leucine
82.	" 4/26Y	"	"	layer	"
83.	" " 2	"	"	"	"
84.	" 4/29	SW-58	U.V.	PEN	Glutamic ( proline)
85.	" "	"	"	"	Cystine
86.	" "	"	"	"	Threonine
87.	" 5/16	SW-13	Sp7		Sp7 R ( lysogenic) on lactose
88.	" "	"	"	"	"
89.	" "	"	"	"	"
90.	" "	"	"	"	"
91.	" "	"	"	"	"
92.	" "	Sw-75	U.V.	plates	Maltose (-)
93.	" "	"	"	"	Maltose slow
94.	" "	SW-84	"	"	Mannitol slow
95.	" "	"	"	"	"
96.	" "	"	"	"	"
97.	" 5/18	SW-50	U.V	PEN	Bl
98.	" "	"	"	"	"
99.	" "	"	"	"	"
100.	" "	"	"	"	"?
101.	" 5/23	SW-92	U.V.	plates	Mannitol (-)
102.	" 6/6	SW-87	Autonomous	lysis on dextrose	"
103.	" "	"	"	"	"
104.	" "	SW-2	Sp7		Sp7 R
105.	" "	"	"	"	"
106.	" "	"	"	"	"
107.	" "	"	"	"	"
108.	" "	"	"	"	"
109.	" 6/9	SW-87	Autonomous	lysis on maltose	

## Salmonella mutants

X = lost  
 L = as mutant  
 Preservation

SW	Source	Agent	Mutation	<del>Details</del>	Preservation
3.	S-20	U.V.	Histidine		
4.	"	"	<del>Yeast extract</del>	"	
5.	S-21	"	Yeast extract		A
6.	"	"	pab	weak response	
7.	"	"	Leucine, iso-leucine, valine		
8.	"	"	Tryptophane		L
9.	"	"	Xylose variable	spontaneous	
10.	SW-8	"	Arabinose -		
12.	SW-10	SP-6	SP-6R		
13.	SW-7	U.V.	Galactose -		L
14.	SW-1	U.V. Pen.	Leucine		X
15.	"	"	"	replaceable by CM	
16.	SW-3	"	Proline		
17.	SY-23	"	Histidine		L
18.	"	"	Leucine		
19.	"	"	Methionine		
20.	"	"	Cystine or methionine		L
21.	"	"	"		
22.	"	"	Am-1		
23.	"	"	Am-5		
24.	SW-17	"	Lysine # methionine		
25.	"	"	Threonine		
26.	SW-18	"	Methionine		
27.	"	"	"		L
28.	"	"	Essential AA		
29.	"	"	Am-1		
30.	"	"	"		
31.	SW-19	"	Proline		
32. ✓	"	"	Leucine		L
33.	"	"	Proline		
34.	"	"	Histidine		L
35.	"	"	Cystine		
36.	Hershey, A.D.	S. typhimurium	Webster		X
37.	SW-17	U.V. Pen	Am-1		L
38.	SY-23	"	Phenylalanine # tyrosine		L
39.	"	"	Proline		
40.	"	"	Histidine		
41.	"	"	Methionine		
42.	SW-17	"	Proline		
43.	"	"	Methionine		
44.	SW-18	"	"		L
45.	"	"	"		
46.	SW-19	"	Proline		
47. ✓	"	"	"		X /
48.	"	"	Iso-leucine # valine		
49.	Rittenberg		S. cholerae-suis (requires B <sub>1</sub> )		
50.	"		S. poona		
51.	SW-25	U.V.	Maltose -		
52.	"	"	"		
53. ✓	"	"	"		X
54.	"	"	"		
55.	"	"	"		

SW	Source	Agent	Mutation	<del>Details</del>	Preservation
56.	SW-50	U.V.Pen	Cystine		
57.	"	"	"	# methionine	
58.	"	"	Leucine		
59.	"	"	Uracil		
60.	"	"	Am-1		
61.	"	"	"		
62.	"	"	"		
63.	"	"	"		A
64.	"	"	"		
65.	"	"	"		
66.	"	"	"		
67.	SW-52	U.V.	Arabinose -		
68. ✓	"	"	"		✓
69.	"	"	"		
70.	SW-31	"	Galactose -		
71.	"	"	"		
72.	"	"	"		L
73.	SW-49	SP-49	SP-49R		
74.	SW-50	?	Arginine		L
75.	SW-74	?	Xanthine		
76.	SW-36	Spontaneous	Thiamine		
77.	"	U.V. Pen	Cystine		L
78.	"	"	"	or serine	L
79.	"	"	"	"	
80.	"	"	"	2 or arginine	L
81. ✓	"	"	Leucine		✓
82.	"	"	"		
83.	"	"	"		
84.	SW#58	"	Glutamic (proline)		
85.	"	"	Cystine		
86.	"	"	Threonine		
87.	SW-13	SP-7	SP-7 R (lysogenic)		L
88.	"	"	"		
89.	"	"	"		
90.	"	"	"		
91.	"	"	"		
92. ✓	SW-75	U.V. plates	Maltose -		✓
93.	"	"	Maltose slow		
94.	SW-84	"	Mannitol slow		
95.	"	"	"		
96.	"	"	"		
97.	SW-50	U.V. Pen	Thiamine		L
98.	"	"	"		
99.	"	"	"		
100.	"	"	"		
101.	SW-92	U.V. plates	Mannitol -		
102.	SW-87	Autonomous	lysis on dextrose		L
103.	"	"	"		
104.	SW-2	SP-7	SP-7 R		L
105.	"	"	"		
106.	"	"	"		
107.	"	"	"		
108.	"	"	"		
109.	SW-87	Autonomous	lysis on maltose		L
110. ✓	SY-115	Purification	Prot. lac- <del>          </del>		✓
111.	"	"	Histidine, lac #		L

SW	Source	Agent	Mutation	Details	Preservation
112.	SW-111	U.V. Pen	Thiamine		
113.	SW-110	"	Purines		L
114.	S.madelia	"	Pantothenate		L
115.	"	"	Am-2		
116.	"	"	Am-1		
117.	"	"	←Pantothenate		X.
118.✓	"	"	Histidine # glycine		X.
119.	"	"	Pantothenate		
120.	"	"	Methionine # lysine		L
121.	"	"	Vitamins		
122.	"	"	Pantothenate		
123.	"	"	Am-2		
124.	"	"	Pantothenate		
125.	"	"	Am-2		
126.	"	"	Yeast extract		
127.	"	"	Hydrolized casein		
128.	"	"	Pantothenate		
129.	"	"	"		
130.	"	"	Yeats extract		
131.	"	"	Am-2		
132.	"	"	Pantothenate		
133.	"	"	"		
134.✓	SW-113	"	Leucine		X.
135.✓	SW-134	U.V.plates	Maltose -		X.
136.	"	"	"		
137.	SW-118	U.V. Pen	Am-3		L
138.	"	"	Am-2		
139.	SW-131	"	Cystine # iso-leucine #valine		L
140.	"	"	"		
141.✓	SW-114	"	Thiamine		
142.✓	SW-111	"	Leucine		X.
143.	SW-139	U.V.plates	Maltose -		L
144.	SW-141	#	Mannitol -		L
145.	SW-137	Purification	Smooth		
146.	SW-135	U.V.plates	Mannitol -		L
147.	SY-33	U.V. Pen	Purines		L
148.	"	"	HC		X
149.	"	"	Am-1		L
150.	SY-84	"	Vitamins		
151.	SW-140	"	Am-1		
152.	SW-149	"	Am-5		
153.	"	"	Am-3		
154.	"	"	Yeast extract		
155.	SW-78	SM	S <sup>r</sup>		L
156.	"	"	"		
157.	SW-81	Azide	Az <sup>r</sup>		L
158.	SW-111	reversion	Histidine #		L
159.	E.coli 134		Histidine-,lac #		L
160.	SY-28	U.V.Pen	Methionine		L
161.	"	"	Uracil		L
162.	E.coli X S.coli		prototroph		
163.✓	SW-160	U.V.Pen	Cystine		X.
164.	"	"	"		
165.	SW-161	"	Thiamine		
166.✓	"	"	"		X

SW	Source	Agency	Mutation	De- <del>tails</del>	Preservation
167.	LT-8 (43)	U.V.Pen	Yeast nucleic acid		X
168.	"	"	Cystine		L
✓169. ✓	"	"	Phenylalanine		L
170.	SW-161	"	Isoleucine-valine		L
171.	"	"	Leucine		X
172.	"	"	Serine		L
173.	"	"	Proline		L
175.	LT-2 (85)	"	Proline		
✓176. ✓	"	"	Methionine		X lost
✓177. ✓	"	"	Leucine		X. tube OK
✓178. ✓	"	"	Phenylalanine		L. " "
179.	"	"	Histidine		X
✓180. ✓	"	"	Cystine # methionine		L. " "
✓181. ✓	"	"	Cystine		L. " "
182.	"	"	"		
183.	LT-7 (578)	"	Cystine or methionine		L
184.	"	"	Proline		L
185.	"	"	Cystine		L
✓186. ✓	"	"	Cystine or methionine		L
187.	"	"	Am-1		
✓188. ✓	"	"	Methionine		X
✓189. ✓	"	"	Cystine		X
190.	"	"	Proline		L
191.	"	"	Leucine		L
192.	"	"	Glycine		L
193.	"	"	Histidine		L
194.	"	"	?		
195.	SW-163	U.V.plates	Maltose -		L
196.	"	"	"		
197.	LT-4 (125)	U.V. Pen	Cystine or methionine		L
198.	"	"	"		L
199.	"	"	Cystine		
200.	"	"	"		L
201.	"	"	Purines		L
✓202. ✓	LT-1 (84)	"	<del>Cystine</del> <i>phototrophic</i> 5/14/53.		L
203.	"	"	"		
204.	LT-3 (22)	"	"		L
205.	"	"	"		
206.	LT-5 (193)	"	"		L
207.	"	"	"		
208.	LT-6 (205)	"	"		L
209.	"	"	"		
210.	LT-9 (116)	"	"		L
211.	"	"	"		
212.	SW-171	U.V.plates	Sorbitol slow		
✓213. ✓	LT-11 (72)	U.V.Pen	Uracil		L
214.	"	"	"		L
215.	LT-12 (111)	"	Phenylalanine		L
216.	"	"	Isoleucine-valine		L
217.	"	"	Leucine		L
218.	LT-10(414)	"	Cystine		L
219.	"	"	"		
220.	LT-14 (135)	"	Phenylalanine		L
221.	"	"	"		
✓222. ✓	LT-10	"	Lysogenic to LT-10		L
223.	"	"	"		

SW	Source	Agent	Mutation	<del>Preservation</del>	Preservation
224.	LT-14	U.V. Pen	Phenylalanine		L
225.	"	"	Leucine		L
226.	"	"	"		
227.	"	"	YNA <del>(mutant)</del>		L
228.	LT-15 (297)	"	Phenylalanine		L
229.	"	"	"		L
230.	LT-13 (331)	"	Leucine		L
231. ✓	"	"	Purines		L
232.	LT-16 (9)	"	Phenylalanine		L
233.	"	"	"		
234.	LT-19 (30)	"	Isoleucine-valine		L
235.	LT-20 (428)	"	Phenylalanine		L
236.	"	"	"		
237.	LT-21 (192)	"	"		L
238.	"	"	Histidine		L
239. ✓	"	"	Isoleucine-valine		L.
240. ✓	LT-22 (409)	"	Phenylalanine # tyrosine		L.
241. ✓	"	"	Threonine		L.
242.	"	"	"		
243.	"	"	Pyrimidine		L
244.	"	"	"		
245. ✓	"	"	Purines		.
246. ✓	"	"	Cystine		L.
247.	"	"	"		
248.	"	"	Leucine		
249.	"	"	"		
250.	LT-3	"	Leucine # YNA		L
251.	LT-15 (297)	"	Leucine		
252.	LT-5	"	Histidine		L
253.	LT-1 (306)	"	Pantothenate		
254.	"	"	Cystine or methionine		L
255.	"	"	Cystine		L
256.	"	"	"	"	
257.	"	"	"	"	
258.	LT-19 (2)	"	Histidine		L
259.	"	"	Methionine		L
260. ✓	"	"	Cystine		L.
261.	LT-20	"	Cystine		L
262.	SW-238	"	"		L
263.	SW-237	"	Phenylalanine		L
264.	"	"	Cystine		L
265.	"	"	Am-3		L
266.	"	"	Tryptophane		
267.	"	"	Am-1		
268. ✓	SW-246	"	Am-2		L
269.	"	"	Proline		L
270.	"	"	Methionine		L
271.	"	"	"		
272. ✓	SW-261	"	"		L
273. ✓	SW-236	"	Histidine		L
274.	"	"	Proline		L
275.	"	"	Am-1		L
276.	"	"	"		
277.	"	"	"		
278.	"	"	"		

SW	Source	Agent	Mutation	Details	Preservation
279.	SW-240	U.V. Pen	Tryptophane		L
<del>280.</del> ✓	"	"	"		L
281.	"	"	"		L
282.	"	"	"		L
283.	SW-251	"	←Purines or histidine ?		L
284.	SW-258	"	HC		L
285.	SW-260	"	Methionine		
286.	"	"	Leucine		
287.	LT-10	U.V. plates	LT-10/ LT-10		
288.	"	"	"		L
289.	"	"	"		
290.	SW-231	U.V. Pen	Isoleucine-valine		L
291.	"	"	"		L
<del>292.</del> ✓	SW-229	"	Tyrosine		L
293.	"	"	HC		L
<del>294.</del> ✓	SW-224	"	Am-5		L
295.	SW-225	"	"		L
296.	"	"	Am-4		L
297.	SW-272 X SW-279	Cross	Prototroph		
298.	"	"	"		
299.	SW-230	U.V. Pen.	Isoleucine-valine		L
300. ✓	SW-184	"	Cystine		L
301. ✓	"	"	Vitamins		L
302. ✓	SW-168	"	Phenylalanine # tyrosine		L
303. ✓	SW-217	"	Yeast extract		L
304.	SW-272	U.V. plates	Maltose -		L
305.	"	"	"		
306.	"	"	"		L
307.	SW-279	"	Galactose -		L
308.	"	"	"		L
309.	"	"	"		
310.	"	"	"		
311.	"	"	"		
312. ✓	E. coli-134	Purification	Adenine		L
313.	LT-20	U.V. Pen	Am-3 triple		L
314.	LT-16	"	"		L
315.	"	"	"		
316.	"	"	"		
317.	LT-11	"	Yeast extract		L
318.	"	"	"		
319.	SW-241	"	Methionine		L
320.	"	"	"		
321.	"	"	Am-1		
322.	SW-243	"	Leucine		L
323.	"	"	Am-1		L
324.	SW-250	"	?		L
325.	SW-204	"	YNA		L
326.	SW-178	"	Yeast extract		L
327.	SW-306	Azide	Az R		L
328.	"	"	"		
329.	"	"	"		
330.	SW-307	SM	S <sup>r</sup>		L
331.	"	"	"		
332.	"	#	"		

SW	Source	Agent	Mutation	Details	Preservation
333.	SW-306	SM	S <sup>r</sup>		
334.	"	"	"		L
335.	SW-307	Azide	Az <sup>r</sup>		
336.	"	"	"		L
337.	SW-191	U.V. Pen	Yeast extract		L
338.	"	"	"		
339.	"	"	Purines		L
340.	SW-253	"	Isoleucine-valine	<i>cut</i>	L
341.	#	"	YNA		L
342.	SW-254	"	Isoleucine-valine		L
343.	"	"	YNA		
344.	SW-197	"	Histidine		L
345.	SW-199	"	Vitamins		L
346.	"	"	Leucine		L
347.	SW-306	U.V. plates	Mannitol -		L
348.	"	"	"		
349.	SW-327	"	"		
350.	"	"	"		
351.	SW-307	"	Xylose -		L
352.	"	"	"		
353.	SW-330	"	"		
354.	"	"	"		L
355.	SW-272	"	Galactose -		L
356.	"	"	"		
357.	SW-279	"	Maltose -		L
358.	"	"	"		
359.	SW-341	"	Galactose -		L
360.	"	"	"		
361.	SW-342	"	Maltose -		L
362.	"	"	"		
363.	SW-286	"	"		L
364.	"	"	"		
365.	SW-284	"	Galactose -		
366.	"	"	"		L
367.	SW-306.	U.V. Pen	Isoleucine-valine		L
368.	"	"	HC		L
369.	"	"	Yeast extract		
370.	"	"	Tryptophane		L
371.	"	"	HC		
372.	"	"	Am-2		L
373.	"	"	Tryptophane		L
374.	S. senftenberg	"	Leucine		L
375.	S. tm cop.	"	Am-2		L
376.	"	"	Am-1		L
377.	S. bonar.	"	Am-4		L
378.	S. para B	"	Am-4		L
379.	"	"	Vitamins		L
380.	S. newport	"	"		L
381.	SW-169	"	Cystine		
382.	"	"	"		
383.	SW-240	"	YNA		L
384.	SW-351	"	Histidine		
385.	"	"	"		L
386.	SW-299	U.V. plates	Galactose -		
387.	"	"	"		

SW	Source	Agent	Mutation	Details	Preservation
388.	SW-213	U.V.Pen	Lysine		L
389.	SW-217	"	Am-3 triple		L
390.	"	"	"		
391. ✓	SW-215	"	Serine or glycine		L
392.	SW-252	"	Lysine		L
393.	"	"	"		
394.	SW-179	"	HC		L
395. ✓	LT-11	"	Uracil		L
396.	"	"	"		
397.	LT-9	"	Cystine #isoleucine-valine		L
398.	"	"	Cystine		
399.	"	"	"		
400. ✓	LT-10	"	Purines		<del>L</del>
401.	"	"	"		
402. ✓	LT-16	"	Cystine		L
403.	"	"	Proline		L
404.	"	"	Phenylalanine#tyrosine		L
405.	"	"	"		
406.	SW-167	"	HC		L
407.	"	"	"		
408.	BT-230 (306)	"	Guanine		L
409.	SW-230	"	Purine		L
410.	LT-1 (306)	"	Cystine		L
411. ✓	SW-410	"	Methionine		<del>L</del>
412. ✓	"	"	HC		<del>L</del>
413.	"	"	Threonine		<del>L</del>
414. (3)	SW-176 272	"	Histidine		<del>L</del>
415. ✓	"	"	"		L
416.	SW-175	"	HC		L
417.	"	"	Histidine		L
418. ✓	SW-168	"	Tyrosine		L
419.	"	"	"		
420. ✓	SW-406	"	Am-1		L
421.	"	"	"		
422. ✓	SW-408	"	"		L
423.	"	"	"		
424. ✓	SW-402	"	Purines		L
425.	SW-228	"	"		<del>L</del>
426. ✓	SW-216	"	Guanine		L
427.	LT-18 (100)	"	Leucine		L
428. ✓	"	"	Cystine		L
429.	"	"	"		
430. ✓	SW-427	"	Proline		L
431. ✓	"	"	"		L
432.	SW-428	"	Am-2		<del>L</del>
433. ✓	SW-219	"	YNA		<del>L</del>
434.	SW-252	"	Methionine # lysine		
435. (β) ✓	SW-351	SM (500u)	S <sup>r</sup>		L
436. ✓	"	"	"		L
437. ✓	SW-397	"	"		L
438.	"	"	"		